
Sequence Listing was accepted.

If you need help call the Patent Electronic Business Center at (866)

217-9197 (toll free).

Reviewer: Keisha Douglas

Timestamp: [year=2007; month=12; day=29; hr=12; min=36; sec=37; ms=744;

]

Validated By CRFValidator v 1.0.3

Application No: 10590897 Version No: 1.1

Input Set:

Output Set:

Started: 2007-12-29 12:35:41.795

Finished: 2007-12-29 12:35:42.999

Elapsed: 0 hr(s) 0 min(s) 1 sec(s) 204 ms

Total Warnings: 53

Total Errors: 0

No. of SeqIDs Defined: 55

Actual SeqID Count: 55

Error code		Error Description									
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(1)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(2)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(3)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(4)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(5)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(6)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(7)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(8)
M	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(9)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(10)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(11)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(12)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(13)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(14)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(15)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(16)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(17)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(18)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(19)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(20)

Input Set:

Output Set:

Started: 2007-12-29 12:35:41.795

Finished: 2007-12-29 12:35:42.999

Elapsed: 0 hr(s) 0 min(s) 1 sec(s) 204 ms

Total Warnings: 53

Total Errors: 0

No. of SeqIDs Defined: 55

Actual SeqID Count: 55

Error code Error Description

This error has occured more than 20 times, will not be displayed

W 251 Found intentionally skipped sequence in SEQID (35)

SEQUENCE LISTING

<110>	Kidum R&D Applications Unit, State of Israel, Ministry of Agricultural Research Organization, Volcany Center	
<120>	ENZYMES, CELLS AND METHODS FOR ASYMMETRIC RECOMBINATION	
<130>	Kidum/005 PCT	
	10/590897	
<141>	2006-08-28	
<150>	US 60/547436	
<151>	2004-02-26	
<160>	55	
<170>	PatentIn version 3.3	
<210>	1	
<211>	8	
<212>	DNA	
<213>	Artificial	
<220>		
	mutant loxP spacer	
<400>	1	
acgtato	gc	8
<210>		
<211>	8	
<212>	DNA	
<213>	Artificial	
<220>		
<223>	Mutant LoxP spacer	
<400>	2	
aagtato	gc	8
<210>	3	
	8	
<212>	DNA	
	Artificial	
<220>		
<223>	Mutant LoxP spacer	
<400>	3	
aggtato	ge	8
<210>	4	

<211> 8

```
<212> DNA
<213> Artificial
<220>
<223> Mutant LoxP site
<400> 4
atatatgc
                                                                    8
<210> 5
<211> 8
<212> DNA
<213> Artificial
<220>
<223> Mutant LoxP spacer
<400> 5
atctatgc
                                                                    8
<210> 6
<211> 8
<212> DNA
<213> Artificial
<220>
<223> Mutant LoxP spacer
<400> 6
atttatgc
                                                                    8
<210> 7
<211> 8
<212> DNA
<213> Artificial
<220>
<223> Mutant Lox P spacer
<400> 7
atgcatgc
                                                                    8
<210> 8
<211> 8
<212> DNA
<213> Artificial
<220>
<223> Mutant LoxP spacer
<400> 8
atgaatgc
                                                                    8
```

```
<210> 9
<211> 8
<212> DNA
<213> Artificial
<220>
<223> Mutant LoxP spacer
<400> 9
atggatgc
                                                                    8
<210> 10
<211> 8
<212> DNA
<213> Artificial
<220>
<223> Mutant LoxP spacer
<400> 10
atgtgtgc
                                                                    8
<210> 11
<211> 8
<212> DNA
<213> Artificial
<220>
<223> Mutant LoxP spacer
<400> 11
atgtttgc
                                                                    8
<210> 12
<211> 8
<212> DNA
<213> Artificial
<220>
<223> Mutant LoxP spacer
<400> 12
atgtctgc
                                                                    8
<210> 13
<211> 8
<212> DNA
<213> Artificial
<220>
```

<223> Mutant LoxP spacer

```
<400> 13
atgtacgc
                                                                    8
<210> 14
<211> 8
<212> DNA
<213> Artificial
<220>
<223> Mutant LoxP spacer
<400> 14
atgtaggc
                                                                    8
<210> 15
<211> 8
<212> DNA
<213> Artificial
<220>
<223> Mutant LoxP spacer
<400> 15
atgtatac
                                                                    8
<210> 16
<211> 8
<212> DNA
<213> Artificial
<220>
<223> Mutant LoxP spacer
<400> 16
acgtatgc
                                                                    8
<210> 17
<211> 8
<212> DNA
<213> Artificial
<220>
<223> Mutant LoxP spacer
<400> 17
aagtatgc
                                                                    8
<210> 18
<211> 8
<212> DNA
```

<213> Artificial

```
<220>
<223> Mutant LoxP spacer
<400> 18
aggtatgc
                                                                    8
<210> 19
<211> 8
<212> DNA
<213> Artificial
<220>
<223> Mutant LoxP spacer
<400> 19
atgtatac
                                                                    8
<210> 20
<211> 8
<212> DNA
<213> Artificial
<220>
<223> Mutant LoxP spacer
<400> 20
atgtatcc
                                                                    8
<210> 21
<211> 8
<212> DNA
<213> Artificial
<220>
<223> Mutant LoxP spacer
<400> 21
atgtattc
                                                                    8
<210> 22
<211> 8
<212> DNA
<213> Artificial
<220>
<223> Mutant LoxP spacer
<400> 22
acgtatac
                                                                    8
<210> 23
```

<211> 8

```
<212> DNA
<213> Artificial
<220>
<223> Mutant LoxP spacer
<400> 23
atatatac
                                                                    8
<210> 24
<211> 8
<212> DNA
<213> Artificial
<220>
<223> Mutant LoxP spacer
<400> 24
atgcatac
                                                                    8
<210> 25
<211> 8
<212> DNA
<213> Artificial
<220>
<223> Mutant LoxP spacer
<400> 25
atgtgtac
                                                                    8
<210> 26
<211> 8
<212> DNA
<213> Artificial
<220>
<223> Mutant LoxP spacer
<400> 26
aagtatcc
                                                                    8
<210> 27
<211> 8
<212> DNA
<213> Artificial
<220>
<223> Mutant LoxP spacer
<400> 27
atctatcc
                                                                    8
```

```
<210> 28
<211> 8
<212> DNA
<213> Artificial
<220>
<223> Mutant LoxP spacer
<400> 28
atgaatct
                                                                    8
<210> 29
<211> 8
<212> DNA
<213> Artificial
<220>
<223> Mutant LoxP spacer
<400> 29
atgtttcc
                                                                    8
<210> 30
<211> 8
<212> DNA
<213> Artificial
<220>
<223> Mutant LoxP spacer
<400> 30
agttattc
                                                                    8
<210> 31
<211> 8
<212> DNA
<213> Artificial
<220>
<223> Mutant LoxP spacer
<400> 31
atttatac
                                                                    8
<210> 32
<211> 8
<212> DNA
<213> Artificial
<220>
```

<223> Mutant LoxP spacer

```
<400> 32
atggattc
                                                                    8
<210> 33
<211> 8
<212> DNA
<213> Artificial
<220>
<223> Mutant LoxP spacer
<400> 33
atgtcttc
                                                                    8
<210> 34
<211> 8
<212> DNA
<213> Artificial
<220>
<223> Mutant LoxP spacer
<400> 34
atgtatgc
                                                                    8
<210> 35
<400> 35
000
<210> 36
<211> 46
<212> DNA
<213> Bacteriophage P1
<220>
<221> misc_feature
<222> (1)..(6)
<223> XhoI - restriction site
<220>
<221> misc_feature
<222> (41)..(46)
<223> BamH1 - restriction site
<400> 36
ctcgagataa cttcgtatag catacattat acgaagttat ggattc
                                                                   46
<210> 37
<211> 46
```

<212> DNA

<213> Bacteriophage P1

```
<221> misc_feature
<222> (1)..(6)
<223> EcoR1-restriction site
<220>
<221> misc_feature
<222> (41)..(46)
<223> Pst1-restriction site
<400> 37
gaattcataa cttcgtatag catacattat acgaagttat ctgcag
                                                                     46
<210> 38
<211> 46
<212> DNA
<213> Artificial
<220>
<223> a symmetric recombination site containing mutant loxM7
      palindromic repeats
<220>
<221> misc_feature
<222> (1)..(6)
<223> Xhol-restriction site
<220>
<221> misc_feature
<222> (41)..(46)
<223> BamH1-restriction site
<400> 38
ctcgagataa ctctatatag catacattat atagagttat ggattc
                                                                     46
<210> 39
<211> 46
<212> DNA
<213> Artificial
<220>
<223> a symmetric recombination site containing mutant loxM7
      palindromic repeats
<220>
<221> misc_feature
<222> (1)..(6)
<223> EcoR1-restriction site
<220>
<221> misc_feature
```

<220>

```
<222> (41)..(46)
<223> Pst1-restriction site
<400> 39
gaattcataa ctctatatag catacattat atagagttat ctgcag
                                                                     46
<210> 40
<211> 46
<212> DNA
<213> Artificial
<220>
<223> an assymmetric recombination site containing one half of mutant
       loxM7 and another half of WT LoxP (non-palindromic repeats)
<220>
<221> misc_feature
<222> (1)..(6)
<223> Xhol-restriction site
<220>
<221> misc_feature
<222> (41)..(46)
<223> BamH1-restriction site
<400> 40
ctcgagataa cttcgtatag catacattat atagagttat ggattc
                                                                     46
<210> 41
<211> 46
<212> DNA
<213> Artificial
<220>
<223> an assymmetric recombination site containing one half of mutant
       loxM7 and another half of WT LoxP (non-palindromic repeats)
<220>
<221> misc_feature
<222> (1)..(6)
<223> EcoR1-restriction site
<220>
<221> misc_feature
<222> (41)..(46)
<223> Pst1-restriction site
<400> 41
gaattcataa cttcgtatag catacattat atagagttat ctgcag
                                                                     46
<210> 42
```

<211> 34

```
<212> DNA
<213> Artificial
<220>
<223> loxM7 (Santoro et al., 2002, Proc. Natl. Acad. Sci. USA, 99:
       4185-4190, 2002).
<400> 42
ataactctat atagcataca ttatatagag ttat
                                                                      34
<210> 43
<211> 34
<212> DNA
<213> Artificial
<220>
      an asymmetric recombination site consiting of one half of loxP \mbox{WT}
<223>
       and one half of loxM7 (Santoro et al., ibid)
<400> 43
ataacttcgt atagcataca ttatatagag ttat
                                                                      34
<210> 44
<211> 34
<212> DNA
<213> Artificial
<220>
       an asymmetric recombination site consiting of one half of loxP \mbox{WT}
<223>
       and one half of loxM7 (Santoro et al., ibid)
<400> 44
ataactctat atagcataca ttatacgaag ttat
                                                                      34
<210> 45
<211> 34
<212> DNA
<213> Artificial
<220>
<223> mutant LTR site (LTR1)
<400> 45
tcaagttagt accgttcaac tggtactaac ttga
                                                                      34
<210> 46
<211> 34
<212> DNA
<213> Artificial
<220>
<223> mutant LTR recombination site (LTR2)
```

```
<400> 46
tctacttgct ctggttcaac tcagagcaag taga
                                                                    34
<210> 47
<211> 34
<212> DNA
<213> Artificial
<220>
<223> mutant LTR recombination site
<400> 47
                                                                    34
ataacttagt accgcataca tggtactaag ttat
<210> 48
<211> 34
<212> DNA
<213> Artificial
<220>
<223> mutant LTR recombination site
<400> 48
tcaagttcgt atagcataca ttatacgaac ttga
                                                                    34
<210> 49
<211> 34
<212> DNA
<213> Artificial
<220>
<223> mutant LTR recombination site
<400> 49
ataacttgct ctggcataca tcagagcaag ttat
                                                                    34
<210> 50
<211> 34
<212> DNA
<213> Artificial
<220>
<223> mutant LTR recombination site
<400> 50
                                                                    34
tctacttcgt atagcataca ttatacgaag taga
<210> 51
<211> 34
<212> DNA
```

<213> Artificial

<220>		
<223>	mutant LTR recombination site	
<400>	⊑1	
	cgt atagcataca ttatacgaag ttga	34
ccaacc	ege deageaeaca eeacaegaag eega	J 1
<210>	52	
<211>	34	
<212>	DNA	
<213>	Artificial	
<220>		
<220>	mutant LTR recombination site	
\ZZ J <i>Z</i>	Mutant Lik recombination site	
<400>	52	
ataagt	tagt atagcataca ttatactaac ttat	34
<210>		
	34	
<212>	Artificial	
\ZIJ/	ALCITICIAL	
<220>		
<223>	mutant LTR recombination site	
<400>		
ataacti	cgt accgcataca tggtacgaag ttat	34
<210>	54	
<211>	34	
<212>	DNA	
<213>	Artificial	
<220>		
<223>	mutant LTR recombination site	
<400>	5.4	
	gct atagcataca ttatagcaag ttat	34
<210>		
<211>		
<212>		
<213>	Artificial	
<220>		
	mutant LTR recombination site	
<400>	55	
-++	cat ctagcataca tcagacgaag ttat	34